

Various other modifications will be apparent to and can be readily made by those skilled in the art without departing from the scope and spirit of this invention. Accordingly, it is not intended that the scope of the claims appended hereto be limited to the description as set forth herein, but rather that the claims be broadly construed.

WHAT IS CLAIMED IS:

1. A photoelectric converter, comprising:

a photoelectric converter;

an amplifier;

a reset circuit; and

a charge transfer circuit between an output terminal of the photoelectric converter and an input terminal of the amplifier, the input terminal of the amplifier being connected to the reset circuit,

wherein after accumulation of a light signal of the photoelectric converter, a reference signal held at the input terminal of the amplifier is read from an output terminal of the amplifier, the charge transfer circuit is opened to transfer light signal charge of the photoelectric converter to the input terminal of the amplifier, after the charge transfer circuit is closed, a light signal held at the input terminal of the amplifier is read from the output terminal of the amplifier as a light signal, the charge transfer circuit and the reset circuit are opened to reset the output terminal of the photoelectric converter and the input terminal of the amplifier, and after the reset circuit is closed, the charge transfer circuit is closed, whereby subsequent accumulation of a light signal is conducted.

2. A photoelectric converter comprising:

a photoelectric converter;

an amplifier;

a reset circuit; and

a charge transfer circuit between an output terminal of photoelectric converter and an input terminal of amplifier, the output terminal of the photoelectric converter being connected to the reset circuit,

wherein after accumulation of a light signal of the photoelectric converter, a reference signal held at the input terminal of the amplifier is read from an output terminal of the amplifier, the charge transfer circuit is opened to transfer light signal charge of the photoelectric converter to the input terminal of the amplifier, after the charge transfer circuit is closed, a light signal held at the input terminal of the amplifier is read from the output terminal of the amplifier as a light signal, the charge transfer circuit and the reset circuit are opened to reset the output terminal of the photoelectric converter and the input terminal of the amplifier, and after the reset circuit is closed, the charge transfer circuit is closed, whereby subsequent accumulation of a light signal is conducted.

3. A photoelectric converter comprising:
a photoelectric converting portion;
an amplifier to receive a reference signal and a light signal from the photoelectric converting portion;
a reference signal transfer circuit;
a reference signal holding circuit, the reference signal being transferred from the amplifier through the reference signal transfer circuit to the reference signal holding circuit;
a light signal transfer circuit;
a light signal holding circuit, the light signal being transferred from the amplifier through the light signal transfer circuit to the light signal holding circuit;
a second reference signal transfer circuit;
a second light signal transfer circuit; and
a second amplifier having an input terminal connected with the reference signal holding circuit through the second reference signal transfer

circuit and connected with the light signal holding circuit through the second light signal transfer circuit;

5 wherein during a signal reading period, the second light signal transfer circuit is opened to transfer the light signal held at the light signal holding circuit to the input terminal of the second amplifier, a light signal output is read from an output terminal of the second amplifier, the second reference signal transfer circuit is opened not earlier than when the second light signal transfer circuit is closed to transfer the reference signal held at the reference signal holding circuit to the input terminal of the second amplifier,
10 and a reference signal output is read from the output terminal of the second amplifier.